

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1. (Previously presented) The method of claim 11, wherein said diatomaceous algae is *Chaetoceros gracilis*.
2. (Previously presented) The method of claim 11, wherein said diatomaceous algae is *Skeletonema costatum*.
3. (Previously presented) The method of claim 1, wherein the growth-limiting factor is silicate deprivation.
4. (Previously presented) The method of claim 1, wherein the growth-limiting factor is a nutrient deprivation.
5. (Previously presented) The method of claim 1, wherein more than one growth-limiting factor is applied.
6. (Previously presented) The method of claim 1, wherein the growth-limiting factor is applied once the culture has reached a concentration of at least 10^7 cells/mL.
- 7-10. (Cancelled)
11. (Currently amended) A method for specifically producing polyunsaturated fatty acids from diatomaceous algae, comprising the step of applying at least one growth-limiting factor to a culture of diatomaceous algae at the end of the exponential growth phase after 6 to 7 days of culture, causing growth arrest of said culture and production and stocking by said algae in culture of polyunsaturated fatty acids.
12. (Currently amended) A method for producing specifically polyunsaturated fatty acids from diatomaceous algae, comprising the steps of:

- a. applying at least one growth-limiting factor to a culture of diatomaceous algae at the end of the exponential growth phase after 6 to 7 days of culture, causing growth arrest of said culture and production and stocking by said algae in culture of polyunsaturated fatty acids; and
- b. recovering the polyunsaturated fatty acids from said algae.